

## Bay Act Program (Chesapeake Bay)



# Bay Act Program



The  
Chesapeake  
Bay

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# Bay Act Program



## James City County and the Chesapeake Bay

James City County is located in coastal plain (tidewater) geographic region of Virginia. The coastal plain is flat land located near the Atlantic Ocean and the Chesapeake Bay – east of the fall line.

The fall line is the natural border between the coastal plain (tidewater) and piedmont geographic regions where waterfalls prevent further travel on rivers.

Being in the coastal plain (tidewater), all of James City County drains to the Chesapeake Bay through the Lower James and York River watersheds.

The Chesapeake Bay is the largest estuary – a body of water where fresh and salt water mix - in the United States.

# Bay Act Program



## James City County and the Chesapeake Bay

The Chesapeake Bay is the largest of 130 estuaries in the United States. It is 200 miles long and has 11,600 miles of tidal shoreline. The drainage area (watershed) to the Chesapeake Bay is 64,000 ***square miles*** and includes parts of six states – Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia - and all of the District of Columbia.

Within the Chesapeake Bay watershed there are more than 17 million people and 100,000 stream and rivers (known as waterways) and everyone within the watershed lives within a few minutes of one of these waterways. These waterways directly link our roads, homes, schools and places of worship and business, and recreation to the Chesapeake Bay.

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# Bay Act Program



## The Bay Act

The Chesapeake Bay Preservation Act (Code of Virginia, Title 62.1, Chapter 3.1 Article 2.5, § 62.1-44.15:67 ), commonly known as "The Bay Act" in Virginia, was adopted by the Virginia General Assembly in 1988. The Act is a critical element of Virginia's multifaceted response to the Chesapeake Bay Agreement.

The Bay Act established a cooperative relationship between the Commonwealth and local governments aimed at reducing and preventing nonpoint source pollution. The Bay Act, like many other environmental protection programs, is an extension of the public trust doctrine.

# Bay Act Program



## The Bay Act

In general, required elements for localities within Tidewater Virginia subject to the Chesapeake Bay Preservation Act are:

- Comprehensive Plan elements which incorporate water quality protection;
- Chesapeake Bay Preservation Area map;
- Local ordinance which contains performance criteria for the use, development and redevelopment of land;
- Zoning, or other ordinance provisions, which contains water quality protection;
- Subdivision, or other ordinance provisions, which contains water quality protection;
- An adequate plan of development review process;

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## The Bay Act

The beds of Virginia's streams, rivers and estuaries and the waters above them are held and managed by the Commonwealth for the benefit of all Virginians. The Bay Act Program is designed to improve water quality in the Chesapeake Bay and its tributaries by requiring the use of effective conservation planning and pollution prevention practices when using and developing environmentally sensitive lands.

At the heart of the Bay Act is the concept that land can be used and developed in ways that minimizes the negative impacts on water quality. The first sentence of the Bay Act serves as a theme for the entire statute “*Healthy state and local economies and a healthy Chesapeake Bay are integrally related; balanced economic development and water quality protection are not mutually exclusive.*”

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# Bay Act Program



29 Counties  
17 Cities  
38 Towns

James City County is one of 84 Virginia jurisdictions subject to the provisions of Virginia's Chesapeake Bay Preservation Act and the Chesapeake Bay Preservation Area Designation and Management Regulations.

The County was the first locality in Virginia to adopt a local Chesapeake Bay Preservation Ordinance on August 6<sup>th</sup> 1990.

James City County, Virginia is here...



# Bay Act Program



## Local Bay Act Program

Each Tidewater locality **must** adopt a program based on the Bay Act regulations. The Regulations (Chesapeake Bay Preservation Designation and Management Regulations, 9VAC25-830 et seq.), like the Bay Act, recognize local government responsibility for land use decisions. The Regulations are designed to establish a framework for compliance, but do not dictate precisely what local programs must look like.

Local governments have flexibility to develop water quality preservation programs that reflect unique local characteristics and embody other community goals. Such flexibility also facilitates innovative and creative approaches in achieving program objectives.

The local Bay Act program is formally reviewed by the Virginia DEQ and the Virginia Water Control Board every 5 years using the approved Compliance Evaluation Review Elements checklist (31 items).

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# Bay Act Program



## Local Bay Act Program

The Regulations address nonpoint source pollution by identifying and protecting certain lands called Chesapeake Bay Preservation Areas (CBPAs). The lands that make up Chesapeake Bay Preservation Area (CBPA) are those that have the most potential to impact water quality directly.

Generally, there are two types of land features as part of the CBPA: those that protect and benefit water quality **Resource Protection Areas (RPAs)** and those that, without proper management, have the potential to damage water quality **Resource Management Areas (RMAs)**.

By careful management of land uses within these areas, local governments help reduce the water quality impacts of nonpoint source pollution and improve the health of the Chesapeake Bay.

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# Bay Act Program



## Local Bay Act Program

The Bay Act Program is formally known locally as the Chesapeake Bay Preservation Area (CBPA) program. All of James City County is an **RMA**. RMAs are all other lands within the County outside the RPA. The County's general CBPA map is used as a guide to show the general location of RPAs.

Site specific boundaries of **RPAs** are determined by the applicant and confirmed by the County, through the preparation of an environmental inventory, which is required by ordinance through the plan of development process, or by submittal of a water quality impact assessment (WQIA) which is required for all Chesapeake Bay exceptions.

The County has standards for what needs to be in a WQIA and also has stream protocol that scores streams to determine whether they are perennial water bodies and subject to CBPA requirements.

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Wetlands are generally characterized by:

**Soils** saturated or flooded during some parts of most years

**Vegetation** that is adapted for moist soil conditions such as bulrush, cattails, rushes, sedges, willows, pines, maples, etc.

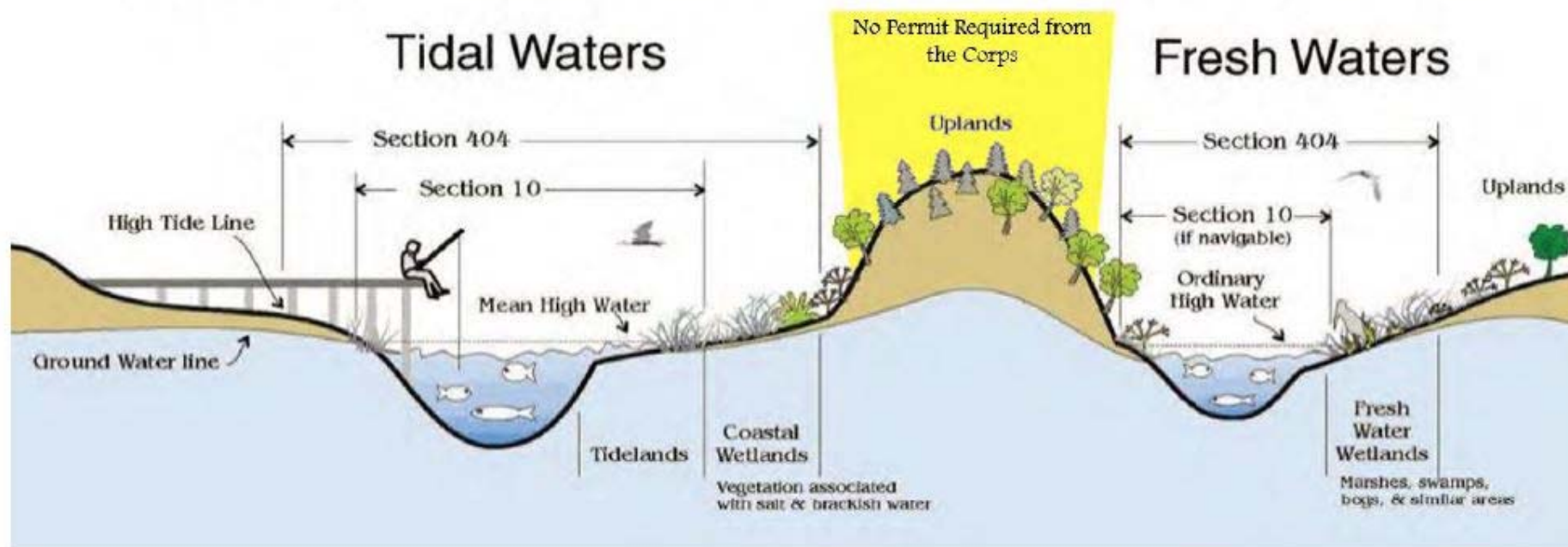
**Hydrology** that has a presence of surface water or saturation during some part of the growing season



## Non-tidal Wetlands

*Federal and State Jurisdiction*

### CORPS OF ENGINEERS REGULATORY JURISDICTION



# Perennial Streams



**Water Body with Perennial Flow.** A body of water that flows in a natural or manmade channel year round during a year of normal precipitation. Can be streams, channels, lakes and ponds. Generally the water table is located above the streambed for most of year.

Several methods are allowed to determine if water bodies such as streams have perennial flow characteristics. One is the James City County Perennial Stream Protocol.

The County scoring method is based on an assessment of:

- Geomorphology
- Hydrology
- Biology

Perennial: scores **18** points or more

Intermittent: scores **10** points or less

For streams between 10 and 18 points, threshold is 14 points with range +/- 2 points (professional judgment required).

*Source: James City County Perennial Stream Protocol*

James City County Perennial Stream Protocol (5/15/09)					
Date:	Project:				
Evaluator:	Evaluation Point:				
	Indicator Type				
<b>A. Geomorphology (Subtotal - )</b>		Absent	Weak	Moderate	Strong
1. Continuous bed and bank *	Primary	0	1	2	3
2. Sinuosity	Secondary	0	0.5	1	1.5
3. In channel structure: riffle-pool sequence	Primary	0	1	2	3
4. Soil texture/depth of channel downcutting *	Secondary	0	0.5	1	1.5
5. Degree of valley development	Primary	0	1	2	3
6. Floodplain/in-channel bench	Secondary	0	0.5	1	1.5
7. Recent alluvial deposits *	Secondary	0	0.5	1	1.5
<b>B. Hydrology (Subtotal - )</b>					
8. Groundwater discharge	Secondary	0	0.5	1	1.5
9. Leaf litter (inverse relationship)	Secondary	1.5	1	0.5	0
10. Flowing water in channel	Primary	0	1	2	3
11. Yorktown Formation	Primary	0	1	2	3
<b>C. Biology (Subtotal - )</b>					
12. Macroinvertebrates	Primary	0	1	2	3
13. Gilled amphibians	Secondary	0	0.5	1	1.5
14. Fish	Secondary	0	0.5	1	1.5
* This metric must be evaluated with consideration of upstream conditions, primarily check for presence of an upstream stormwater discharge into the reach					
<b>Total Points</b>					
<b>Is the Stream Perennial? YES NO</b>					
<b>Reason:</b>					
<b>Additional Factors on which Determination is Based:</b>					
Soil mottling					
Channel geometry, manmade modifications					
Offsite stormflow inputs					
Periphyton					
Grade control					
Primary Indicator is scored from 0 to 3 points, Secondary Indicator is scored from 0 to 1.5 points unless inverse relationship. If inverse relationship, Secondary Indicator is scored at 1.5 for absent down to 0 points for strong.					

# Bay Act Program



## Local Chesapeake Bay Preservation Area (CBPA) Program

All development or redevelopment activities exceeding 2,500 square feet of land disturbance are subject to the plan of development review process.

The County has established guidelines for the preparation of environmental inventories, water quality impact assessments (WQIAs), and stormwater management requirements through the new Virginia Stormwater Management Program (VSMP) which was implemented on July 1, 2014. Stormwater management/Best Management Practice (BMP) facilities follow standards from the Virginia BMP clearinghouse website, the DEQ Stormwater Design Specifications (15 nonproprietary), and the revised Virginia Stormwater Management Handbook.

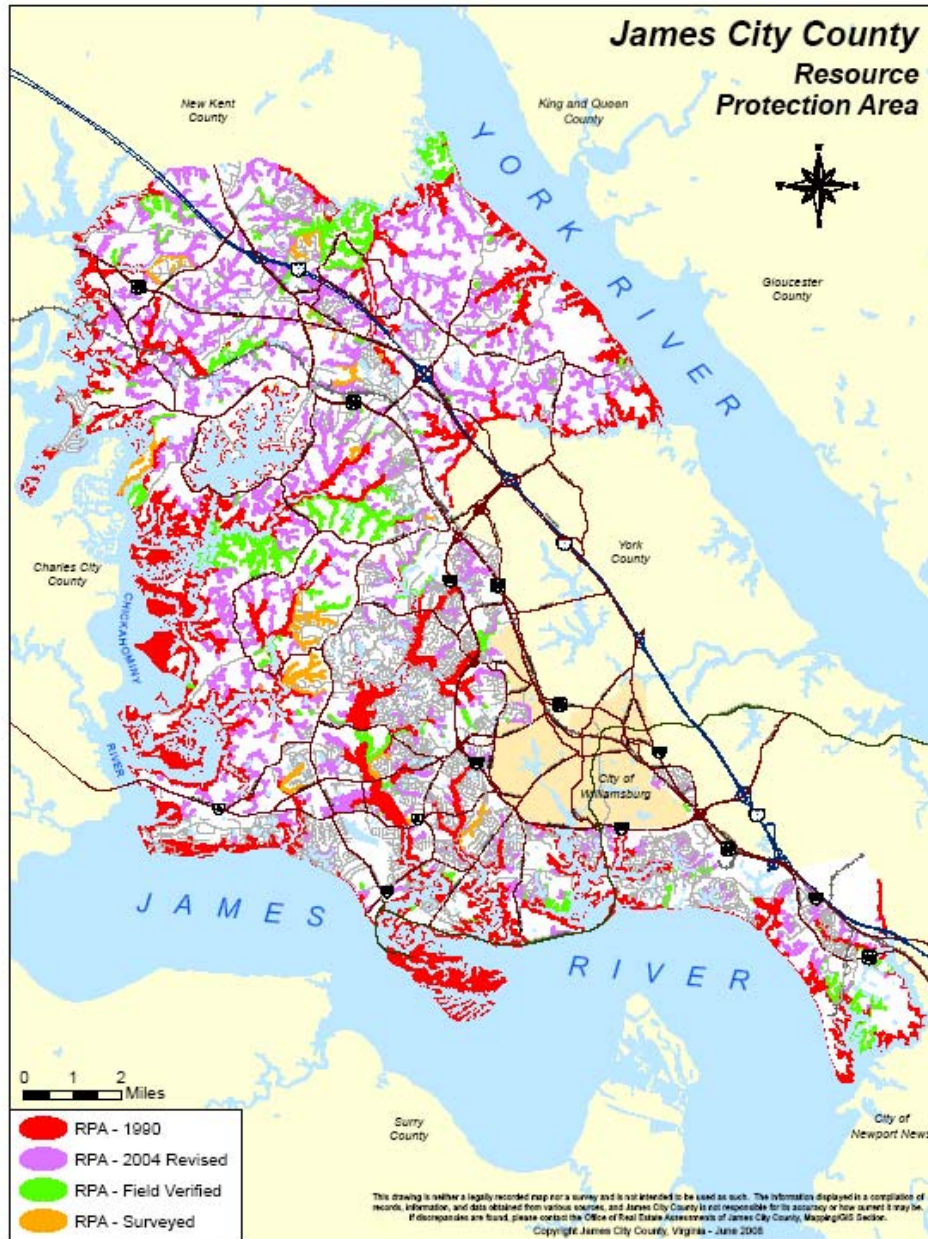
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## County RPA Map

The County is about 144 square miles in land size.

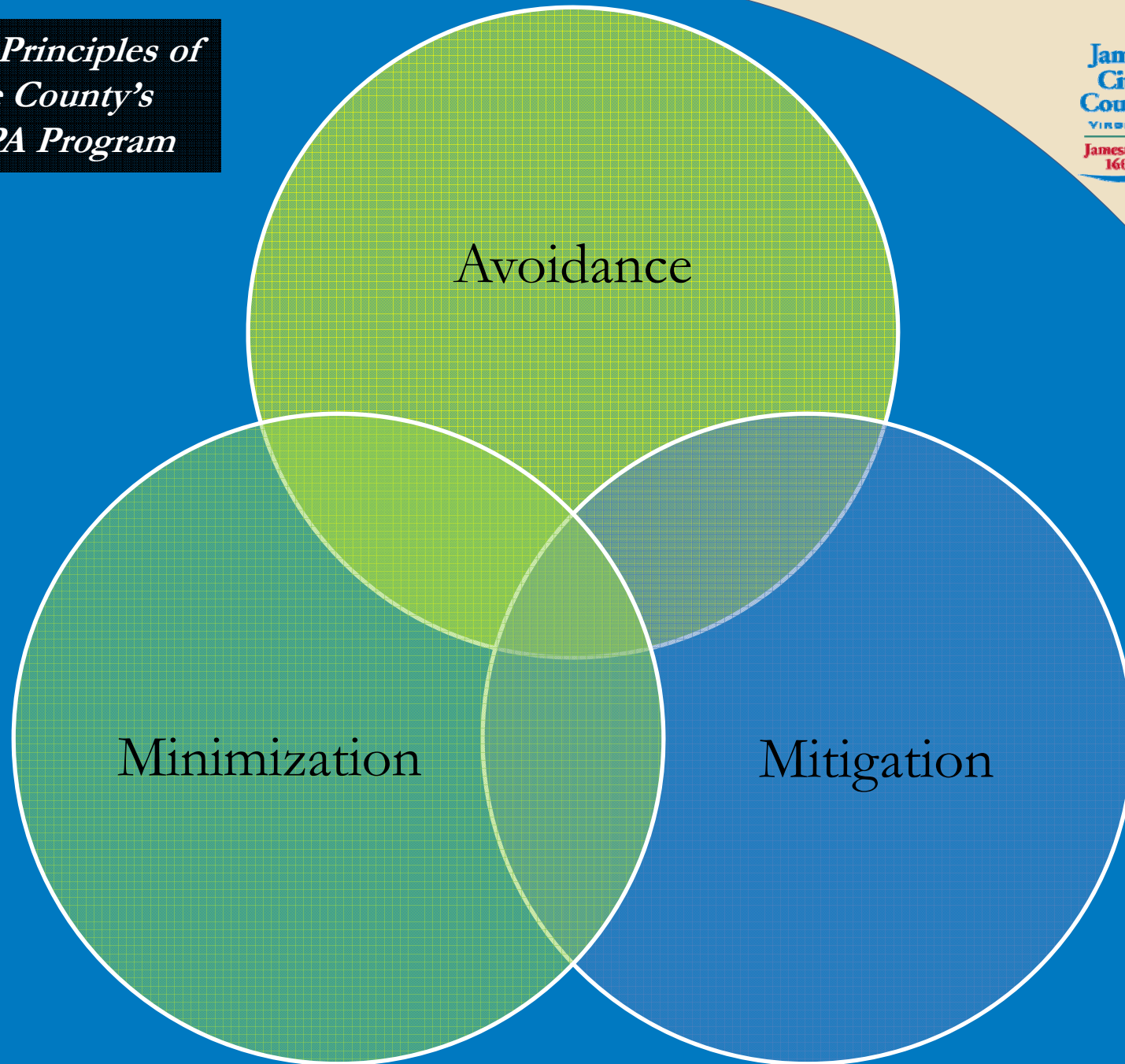
There is approximately 45.3 square miles (29,045 acres) of County land within RPA (31.5%).

Of that about 20.2 square miles (12,955 acres) is in the 100-ft RPA buffer.





*Basic Principles of  
the County's  
CBPA Program*



*Basic Principles of  
the County's  
CBPA Program*



Bay Act Mitigation –  
Surface / Planting Materials

Better

3-Tier Planting  
Riparian Buffer  
Handbook

Multiple Layers of  
Vegetation

Single Layer of Vegetation

Mulch

Stone / Gravel

Lawn / Turfgrass

Bare Soil

Impervious – Least

Hierarchy of  
Preferred Surface  
Materials

Worse

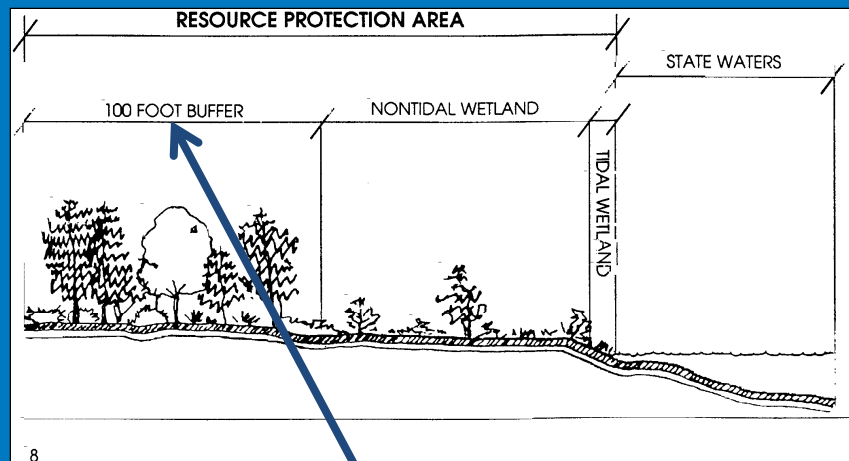
# Resource Protection Area (RPA)



**State:** Code of Virginia, Title 62.1, Chapter 3.1, Article 2.5, Chesapeake Bay Preservation Act §62.1-44.15:67 et seq.

**State:** 9 VAC 25-830 et seq. Chesapeake Bay Preservation Area Designation & Management Regulations.

**Local:** Chapter 23 of the Code of James City County, Chesapeake Bay Preservation Ordinance



” the 100 foot Buffer ”

## RPA

Component of a Chesapeake Bay Preservation Area comprised of lands adjacent to water bodies with perennial flow that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may result in significant degradation to the quality of state waters. RPAs include:

- Tidal shores;
- Tidal wetlands;
- Nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow;
- A buffer area not less than 100 feet in width located adjacent to and landward of the components listed above, and along both sides of any water body with perennial flow (ie. RPA buffer)



# Resource Management Area (RMA)



**State:** Code of Virginia, Title 62.1, Chapter 3.1, Article 2.5, Chesapeake Bay Preservation Act §62.1-44.15:67 et seq.

**State:** 9 VAC 25-830 et seq. Chesapeake Bay Preservation Area Designation & Management Regulations.

**Local:** Chapter 23 of the Code of James City County, Chesapeake Bay Preservation Ordinance

## RMA

That component of a Chesapeake Bay Preservation Area that is not classified as the Resource Protection Area (RPA). Usually situated outside, landward of the RPA. Lands of particular sensitivity within RMAs include, but are not limited to, non-tidal wetlands not in RPAs, floodplains, highly erodible soils, highly permeable soils and hydric soils.

All of James City County, outside the Resource Protection Area (RPA), is considered an RMA. Therefore, includes all areas such as steep slopes, conservation easements, slope-buffer easements and pond-buffer setback areas too.

# Bay Act Program



- Enabling Legislation

Bay Act, Title 62.1, Chapter 3.1 Chesapeake Bay Preservation Act §62.1-44.15:67 & Virginia Administrative Code 9VAC25-830, Chesapeake Bay Preservation Area Designation and Management Regulations.

- Regulatory Guidance

- Riparian Buffer Handbook
- Various published regulatory guidance documents for localities

- Local Ordinance

All the provisions of Chapter 23 of the Code of James City County, Virginia including the County Water Quality Impact Assessment (WQIA) guidelines.

- Other State Tools

- Liaison assigned to County (DEQ)
- Routine compliance reviews
- General website information
- Workshops

# Bay Act Program

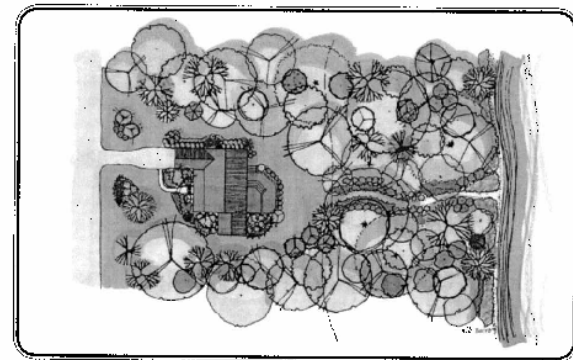


- Riparian Buffer Handbook

*Riparian Buffers Modification & Mitigation Guidance Manual*, Virginia Department of Conservation and Recreation, Chesapeake Bay Local Assistance, September 2003, reprinted 2006

- Introduction
- Riparian Buffer Functions and Values
- Permitted Buffer Modifications
- Passive Recreation Facilities Exemption
- Buffer Management
- Appendices

## **RIPARIAN BUFFERS MODIFICATION & MITIGATION GUIDANCE MANUAL**



VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION  
CHESAPEAKE BAY LOCAL ASSISTANCE

# Bay Act Program



- CBPA Regulatory Guidance for Localities

- Administrative Procedures for the Designation and Refinement of Chesapeake Bay Preservation Area Boundaries: Guidance on the Chesapeake Bay Area Designation and Management Regulations, September 2003, revised September 2008
- Agricultural Operations: Soil & Water Quality Conservation Assessment/Plans, Guidance for Tidewater Localities (and Appendices), December 2002
- Determinations of Water Bodies with Perennial Flow: Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations, September 2003, revised December 2007, revised June 2010

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- CBPA Regulatory Guidance for Localities

- Exceptions: Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations, September 2002, revised June 2009
- Nonconforming Structures and Uses: Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations, September 2002
- Resource Protection Area: Buffer Area Encroachments, Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations, September 2002, revised June 2009

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- CBPA Regulatory Guidance for Localities

- Resource Protection Areas: Nontidal Wetlands, Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations, September 2007, revised December 2007
- Resource Protection Area: Onsite Buffer Area Delineation, Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations, September 2002, revised June 2009
- Resource Protection Area: Permitted Development Activities, Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations, September 2005, revised June 2009, revised June 2010

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- CBPA Regulatory Guidance for Localities

- Silvicultural Operations and the Chesapeake Bay Act, Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations, June 2003
- Stormwater Management Requirements, Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations, September 2002

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# Bay Act Program

- County Issued CBPA Guidance

- Dead-diseased-dying vegetation removal
- Pervious paver block systems for residential Chesapeake Bay Exception applications
- Minor/major water quality impact assessment WQIA
- County perennial stream protocol
- Sensitive Area Activity Application (SAAA form)
- Non-native plants (strict limitations)
- Line of Sight (permitted buffer modification)



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# Bay Act Program



- Chesapeake Bay Local Assistance – DEQ Website

<http://www.deq.state.va.us/Programs/Water/ChesapeakeBay/ChesapeakeBayPreservationAct.aspx>

Information available on this website:

- Virginia Bay Act program & regulations
- Local program contacts & compliance reviews
- Programs & assistance
- News, events & publications
- Resource library

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# Bay Act Program



- JCC – Division of Engineering & Resource Protection

<http://www.jamescitycountyva.gov>

Information available on this website:

- County general RPA maps
- GIS maps with RPA layers
- Sensitive Area Activity Application (SAAA) form
- WQIA guidelines
- RPA sign specifications
- Native plant lists
- Locally developed guidance
- Helpful links

# Bay Act Program

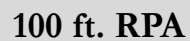


- Administrative

- Water dependent features
- Redevelopment
- Certain roads & driveways
- Principal house structures and necessary utilities on certain pre-platted lots
- Alterations or expansions to non-complying structures in existence prior to 1990. Examples are attached decks and garages
- Exceptions to performance standards
- Exemptions for certain public utilities
- Permitted buffer modifications
  - Sight lines
  - Access paths to water shoreline
  - Woodlot management
  - On-lot, small scale BMPs that prevent erosion

- Bay Board

- Cases that do not meet administrative review requirements
- Encroachments for lots recorded after 2004
- Encroachments into the seaward 50-foot portion of the buffer
- Accessory structures anywhere in the RPA
  - Detached structures
  - Gazebos
  - Patios
  - Retaining walls
  - Sheds
  - Swimming pools
  - Tennis courts
  - Terraces
  - Walkways/sidewalks
  - Other similar impervious surfaces
- Appeals of administrative decisions



## CB Number \_\_\_\_\_

☐ New principal structure construction  
☐ Permitted buffer modifications:  
☐ Accessory (Detached) Structure or Patio  
☐ Other: \_\_\_\_\_

☐ Building addition to principal structure  
☐ Dead/diseased/dying tree removal  
☐ Invasive/noxious weed removal  
☐ Redevelopment: \_\_\_\_\_

☐ Attached Deck  
☐ Sightline  
☐ Access path/trail

# Bay Act Program



## Fees

- A nonrefundable fee of \$25 is required for any case review qualifying for administrative approval, waiver, exception, exemption, variance and permitted buffer modification which may be necessary through the plan of development process – or – for staff review of a Chesapeake Bay Board case.
- A nonrefundable fee of \$100 is required for Chesapeake Bay Board agenda items.

*(Bay Act program fees were adopted by Ordinance 183-A-6 on May 27, 2008. The fees were effective July 1, 2008 and implemented on September 1, 2008. Also refer Section 23-15(7) of the County's Chesapeake Bay Preservation Ordinance)*

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# Bay Act Program



## Common Mitigation Strategies for Chesapeake Bay Exceptions

- Demonstrate avoidance and minimization of impacts
- Native plantings (ie. replanting using the three-tier system per the state Riparian Buffer Handbook)
- Demonstrate reduction in impervious surfaces
- Demonstrate use of onlot runoff reduction techniques (rain gardens, biofilters, permeable pavement, infiltration, disconnection, soil amendments, etc.)
- Strategic placement of new features



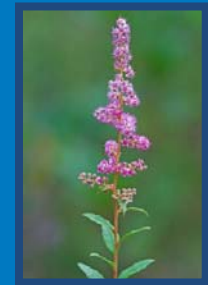


# Bay Act Program



## Common Mitigation Strategies for Chesapeake Bay Exceptions

- Preservation of existing natural vegetation, forests, and steep slope areas
- Conservation landscaping (Bayscapes, etc.)
- Turf/nutrient management (yard, turfgrass, and landscape areas)
- Rainwater harvesting (cisterns, rain barrels, etc.)
- Stabilization of existing eroded areas
- Contribution to the County Chesapeake Bay Trust Mitigation fund (if no other in the ground options exist to plant or mitigate on the subject lot)





## Sight Lines

...One of several Permitted Buffer Modifications allowed by exception...with proper submission, review and approval by County....



AFTER: Sight lines achieved through trimming tree branches, pruning shrubs and limbing up large shrubs.



**This!**



**Not This!**



### **Permitted Buffer Modifications**


Yes, even removal or dead, diseased, dying or in this case a fallen tree due to wind related damage requires permission through the CBE permitted buffer modification process. This is in accordance with 9VAC25-830-140(5) and Section 23-7(c)(1) of the County's Chesapeake Bay Preservation ordinance.

The good news is the process for approval on a case like this is relatively simple using the County's established Sensitive Area Activity Application (SAAA) form. A \$25 fee is required for application review.



**Permitted Buffer Modifications**





Dead trees and logs on the ground provide food and shelter to many organisms and provide nutrients to young forest vegetation as it grows...called "decaying detritus"

**Dead Trees – Part of the RPA**





**Perennial Streams** – Require a 100 ft. buffer on each side from edge of stream or adjacent - connected - delineated jurisdiction wetlands which border the stream.





Resource Protection Area (RPA) and RPA Buffer





Resource Protection Area (RPA) and RPA Buffer





**Permitted Buffer Modification  
Lake Shoreline with Mitigation Plantings**



**Permitted Buffer Modification – Access Path to Water Shoreline**







Chesapeake Bay Exemption - Passive Community Recreational Trail





Educational Signs



## **Agricultural Activities**

Because all of the County is situated in a Chesapeake Bay Preservation Area CBPA - Resource Management Area, agricultural land use activities are subject to the provisions of the Bay Act program. Although exemptions do exist for certain activities such as timbering and agriculture, the requirements of those programs apply and proper evidence of registration with those programs is required to be shown to the County to remain compliant with Bay Act regulations. All lands upon which agricultural activities are being conducted shall undergo a soil and water conservation assessment (SWQCA) or plan (SWQCP) through the local Colonial Soil & Water Conservation District in accordance with 9VAC25-830-130 and Sections 23-7(c)(3) & (c)(4) and 23-9(b)(10) of the County's Chesapeake Bay Preservation ordinance.

Contact County or the Colonial Soil & Water Conservation District staff for additional information.



**Agricultural Activities**



Clearing for Agricultural Activities  
(Soil & Water Conservation Assessment or Plan)







**Bay Act - Agricultural Activities**





Bay Act - Agricultural Activities





11/ No-Till Drilling Operation (Conservation Practice)



